

Christian Stoeckl

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/179548/publications.pdf>

Version: 2024-02-01

84
papers

3,900
citations

136950

32
h-index

123424

61
g-index

84
all docs

84
docs citations

84
times ranked

1699
citing authors

#	ARTICLE	IF	CITATIONS
1	Causes of fuelâ€‘ablator mix inferred from modeling of monochromatic time-gated radiography of OMEGA cryogenic implosions. Physics of Plasmas, 2022, 29, .	1.9	8
2	Enhanced laser-energy coupling with small-spot distributed phase plates (SG5-650) in OMEGA DT cryogenic target implosions. Physics of Plasmas, 2022, 29, .	1.9	9
3	Demonstration of plasma mirror capability for the OMEGA Extended Performance laser system. Review of Scientific Instruments, 2022, 93, 043006.	1.3	1
4	Measurements of the temperature and velocity of the dense fuel layer in inertial confinement fusion experiments. Physical Review E, 2022, 105, .	2.1	5
5	Analysis of limited coverage effects on areal density measurements in inertial confinement fusion implosions. Physics of Plasmas, 2022, 29, .	1.9	1
6	A novel photomultiplier tube neutron time-of-flight detector. Review of Scientific Instruments, 2021, 92, 013509.	1.3	4
7	A multi-channel x-ray temporal diagnostic for measurement of time-resolved electron temperature in cryogenic deuteriumâ€‘tritium implosions at OMEGA. Review of Scientific Instruments, 2021, 92, 023507.	1.3	3
8	Using millimeter-sized carbonâ€‘deuterium foils for high-precision deuteriumâ€‘tritium neutron spectrum measurements in direct-drive inertial confinement fusion at the OMEGA laser facility. Review of Scientific Instruments, 2021, 92, 023503.	1.3	2
9	Reconstructing 3D asymmetries in laser-direct-drive implosions on OMEGA. Review of Scientific Instruments, 2021, 92, 033529.	1.3	11
10	High-resolution x-ray radiography with Fresnel zone plates on the University of Rochesterâ€™s OMEGA Laser Systems. Review of Scientific Instruments, 2021, 92, 033701.	1.3	12
11	Order-of-magnitude laser imprint reduction using pre-expanded high-Z coatings on targets driven by a third harmonic Nd:glass laser. Physics of Plasmas, 2021, 28, .	1.9	9
12	Application of an energy-dependent instrument response function to analysis of nTOF data from cryogenic DT experiments. Review of Scientific Instruments, 2021, 92, 043546.	1.3	4
13	Mitigation of mode-one asymmetry in laser-direct-drive inertial confinement fusion implosions. Physics of Plasmas, 2021, 28, .	1.9	26
14	Talbot-Lau x-ray deflectometer: Refraction-based HEDP imaging diagnostic. Review of Scientific Instruments, 2021, 92, 065110.	1.3	3
15	Experimentally Inferred Fusion Yield Dependencies of OMEGA Inertial Confinement Fusion Implosions. Physical Review Letters, 2021, 127, 105001.	7.8	23
16	Improved imaging using Mn He- \hat{L} x rays at OMEGA EP. Review of Scientific Instruments, 2021, 92, 093508.	1.3	2
17	Using statistical modeling to predict and understand fusion experiments. Physics of Plasmas, 2021, 28, .	1.9	4
18	Impact of spatiotemporal smoothing on the two-plasmonâ€‘decay instability. Physics of Plasmas, 2020, 27, .	1.9	10

#	ARTICLE	IF	CITATIONS
19	Anomalous Absorption by the Two-Plasmon Decay Instability. <i>Physical Review Letters</i> , 2020, 124, 185001.	7.8	22
20	Hot-electron generation at direct-drive ignition-relevant plasma conditions at the National Ignition Facility. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	27
21	A suite of neutron time-of-flight detectors to measure hot-spot motion in direct-drive inertial confinement fusion experiments on OMEGA. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2020, 964, 163774.	1.6	23
22	Implementation of a Talbot-Lau x-ray deflectometer diagnostic platform for the OMEGA EP laser. <i>Review of Scientific Instruments</i> , 2020, 91, 023511.	1.3	12
23	Impact of stalk on directly driven inertial confinement fusion implosions. <i>Physics of Plasmas</i> , 2020, 27, 032704.	1.9	15
24	Self-radiography of imploded shells on OMEGA based on additive-free multi-monochromatic continuum spectral analysis. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	1
25	Deuteron breakup induced by 14-MeV neutrons from inertial confinement fusion. <i>Physical Review C</i> , 2019, 100, .	2.9	9
26	Tripled yield in direct-drive laser fusion through statistical modelling. <i>Nature</i> , 2019, 565, 581-586.	27.8	103
27	Impact of imposed mode 2 laser drive asymmetry on inertial confinement fusion implosions. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	15
28	Nuclear science experiments with a bright neutron source from fusion reactions on the OMEGA Laser System. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2018, 888, 169-176.	1.6	9
29	Calibration of a neutron time-of-flight detector with a rapid instrument response function for measurements of bulk fluid motion on OMEGA. <i>Review of Scientific Instruments</i> , 2018, 89, 10I131.	1.3	21
30	Impact of asymmetries on fuel performance in inertial confinement fusion. <i>Physical Review E</i> , 2018, 98, .	2.1	16
31	Measurement of apparent ion temperature using the magnetic recoil spectrometer at the OMEGA laser facility. <i>Review of Scientific Instruments</i> , 2018, 89, 10I129.	1.3	12
32	The single-line-of-sight, time-resolved x-ray imager diagnostic on OMEGA. <i>Review of Scientific Instruments</i> , 2018, 89, 10G117.	1.3	26
33	Testing a Cherenkov neutron time-of-flight detector on OMEGA. <i>Review of Scientific Instruments</i> , 2018, 89, 10I122.	1.3	7
34	X-ray backlighter requirements for refraction-based electron density diagnostics through Talbot-Lau deflectometry. <i>Review of Scientific Instruments</i> , 2018, 89, 10G127.	1.3	13
35	Three-dimensional hydrodynamic simulations of OMEGA implosions. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	26
36	Monochromatic backlighting of direct-drive cryogenic DT implosions on OMEGA. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	21

#	ARTICLE	IF	CITATIONS
37	A framed, 16-image Kirkpatrick-Baez x-ray microscope. Review of Scientific Instruments, 2017, 88, 093702.	1.3	29
38	Simulation and analysis of time-gated monochromatic radiographs of cryogenic implosions on OMEGA. High Energy Density Physics, 2017, 23, 167-177.	1.5	4
39	An x-ray backlit Talbot-Lau deflectometer for high-energy-density electron density diagnostics. Review of Scientific Instruments, 2016, 87, 023505.	1.3	11
40	Neutron temporal diagnostic for high-yield deuterium-tritium cryogenic implosions on OMEGA. Review of Scientific Instruments, 2016, 87, 053501.	1.3	33
41	Understanding the effects of laser imprint on plastic-target implosions on OMEGA. Physics of Plasmas, 2016, 23, .	1.9	38
42	Calibration of a time-resolved hard-x-ray detector using radioactive sources. Review of Scientific Instruments, 2016, 87, 11E323.	1.3	10
43	Two-Plasmon Decay Mitigation in Direct-Drive Inertial-Confinement-Fusion Experiments Using Multilayer Targets. Physical Review Letters, 2016, 116, 155002.	7.8	27
44	Demonstration of Fuel Hot-Spot Pressure in Excess of 50ÅGbar for Direct-Drive, Layered Deuterium-Tritium Implosions on OMEGA. Physical Review Letters, 2016, 117, 025001.	7.8	72
45	A Particle X-ray Temporal Diagnostic (PXTD) for studies of kinetic, multi-ion effects, and ion-electron equilibration rates in Inertial Confinement Fusion plasmas at OMEGA (invited). Review of Scientific Instruments, 2016, 87, 11D701.	1.3	22
46	Three-dimensional modeling of direct-drive cryogenic implosions on OMEGA. Physics of Plasmas, 2016, 23, .	1.9	69
47	Direct-drive inertial confinement fusion: A review. Physics of Plasmas, 2015, 22, .	1.9	521
48	Ion Thermal Decoupling and Species Separation in Shock-Driven Implosions. Physical Review Letters, 2015, 114, 025001.	7.8	67
49	Time-resolved K _α spectroscopy measurements of hot-electron equilibration dynamics in thin-foil solid targets: collisional and collective effects. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 224001.	1.5	9
50	A new neutron time-of-flight detector for fuel-areal-density measurements on OMEGA. Review of Scientific Instruments, 2014, 85, 11E102.	1.3	23
51	Soft x-ray backlighting of cryogenic implosions using a narrowband crystal imaging system (invited). Review of Scientific Instruments, 2014, 85, 11E501.	1.3	24
52	Improving the hot-spot pressure and demonstrating ignition hydrodynamic equivalence in cryogenic deuterium-tritium implosions on OMEGA. Physics of Plasmas, 2014, 21, .	1.9	139
53	Nuclear imaging of the fuel assembly in ignition experiments. Physics of Plasmas, 2013, 20, 056320.	1.9	65
54	Improving cryogenic deuterium-tritium implosion performance on OMEGA. Physics of Plasmas, 2013, 20, .	1.9	48

#	ARTICLE	IF	CITATIONS
55	Measured hot-electron intensity thresholds quantified by a two-plasmon-decay resonant common-wave gain in various experimental configurations. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	47
56	Measurements of the divergence of fast electrons in laser-irradiated spherical targets. <i>Physics of Plasmas</i> , 2013, 20, 092706.	1.9	30
57	High-resolution spectroscopy used to measure inertial confinement fusion neutron spectra on Omega (invited). <i>Review of Scientific Instruments</i> , 2012, 83, 10D919.	1.3	54
58	Crossed-beam energy transfer in direct-drive implosions. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	133
59	Note: Spatial resolution of Fuji BAS-TR and BAS-SR imaging plates. <i>Review of Scientific Instruments</i> , 2012, 83, 086103.	1.3	31
60	Saturation of the Two-Plasmon Decay Instability in Long-Scale-Length Plasmas Relevant to Direct-Drive Inertial Confinement Fusion. <i>Physical Review Letters</i> , 2012, 108, 165003.	7.8	58
61	Neutron spectrometryâ€”An essential tool for diagnosing implosions at the National Ignition Facility (invited). <i>Review of Scientific Instruments</i> , 2012, 83, 10D308.	1.3	117
62	A spherical crystal imager for OMEGA EP. <i>Review of Scientific Instruments</i> , 2012, 83, 033107.	1.3	47
63	Fast-electron generation in long-scale-length plasmas. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	46
64	The National Ignition Facility neutron time-of-flight system and its initial performance (invited). <i>Review of Scientific Instruments</i> , 2010, 81, 10D325.	1.3	121
65	Crossed-beam energy transfer in implosion experiments on OMEGA. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	142
66	Scaling Hot-Electron Generation to High-Power, Kilojoule-Class Laser-Solid Interactions. <i>Physical Review Letters</i> , 2010, 105, 235001.	7.8	49
67	A gated liquid-scintillator-based neutron detector for fast-ignitor experiments and down-scattered neutron measurements. <i>Review of Scientific Instruments</i> , 2010, 81, 10D302.	1.3	29
68	High-intensity laser-plasma interaction with wedge-shaped-cavity targets. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	10
69	Demonstration of the Highest Deuterium-Tritium Areal Density Using Multiple-Picket Cryogenic Designs on OMEGA. <i>Physical Review Letters</i> , 2010, 104, 165001.	7.8	111
70	Performance of direct-drive cryogenic targets on OMEGA. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	92
71	Role of Hot-Electron Preheating in the Compression of Direct-Drive Imploding Targets with Cryogenic $\langle \text{mml:msub} \langle \text{mml:mi} \text{mathvariant="normal"} \text{D} \langle \text{mml:mn} \text{2} \langle \text{mml:msub} \langle \text{mml:math} \text{Ablators}$. <i>Physical Review Letters</i> , 2008, 100, 165005.	7.8	69
72	High-energy K \pm radiography using high-intensity, short-pulse lasers. <i>Physics of Plasmas</i> , 2006, 13, 056309.	1.9	193

#	ARTICLE	IF	CITATIONS
73	Operation of target diagnostics in a petawatt laser environment (invited). Review of Scientific Instruments, 2006, 77, 10F506.	1.3	30
74	Two-dimensional simulations of plastic-shell, direct-drive implosions on OMEGA. Physics of Plasmas, 2005, 12, 032702.	1.9	126
75	Measurement of preheat due to fast electrons in laser implosions of cryogenic deuterium targets. Physics of Plasmas, 2005, 12, 062703.	1.9	32
76	High-Energy Petawatt Capability for the Omega Laser. Optics and Photonics News, 2005, 16, 30.	0.5	183
77	Prototypes of National Ignition Facility neutron time-of-flight detectors tested on OMEGA. Review of Scientific Instruments, 2004, 75, 3559-3562.	1.3	77
78	Multibeam Effects on Fast-Electron Generation from Two-Plasmon-Decay Instability. Physical Review Letters, 2003, 90, 235002.	7.8	95
79	CVD diamond as a high bandwidth neutron detector for inertial confinement fusion diagnostics. Review of Scientific Instruments, 2003, 74, 1828-1831.	1.3	40
80	Wide-dynamic-range "neutron bang time" detector on OMEGA. Review of Scientific Instruments, 2002, 73, 3796-3800.	1.3	18
81	Hard x-ray detectors for OMEGA and NIF. Review of Scientific Instruments, 2001, 72, 1197-1200.	1.3	68
82	A neutron spectrometer for precise measurements of DT neutrons from 10 to 18 MeV at OMEGA and the National Ignition Facility. Review of Scientific Instruments, 2001, 72, 854-858.	1.3	50
83	Study of direct-drive, deuterium-tritium gas-filled plastic capsule implosions using nuclear diagnostics at OMEGA. Physics of Plasmas, 2001, 8, 4902-4913.	1.9	43
84	Measurement of preheat due to fast electrons in laser implosions. Physics of Plasmas, 2000, 7, 3714-3720.	1.9	33